

of large callus. The injury gave so few symptoms that it was not discovered without direct examination. The children moved the arm as well as on the uninjured side. Excessive abduction only was difficult. The children were not especially disturbed by the fracture. They could be washed and dressed with no more disturbance than usual, and the fracture was never detected by a nurse. There was no deformity of the shoulder, no extravasation of blood, and very little depression at the point of fracture. The most significant symptom was crepitation, which was readily elicited. When the periosteum was not torn crepitation and abnormal movement were obtained with difficulty.

These fractures recovered in typical manner, large and firm callus forming in one or two weeks. One fracture was unhealed ten days after the injury, but healed firmly in two weeks when the arm was immobilized.

Treatment was unnecessary, but nurses were instructed to avoid excessive motion of the arm. If a firm callus did not immobilize the fracture in one week a bandage was applied.

The question naturally arises, How does fracture of the clavicle occur in vertex presentation? Usually through improper manipulation by someone who endeavors to assist the mother. The writer doubts whether the fracture always happens at the moment of birth. He believes rather that the accident occurs while the child is passing through the cavity of the pelvis.

During the operation of version and extraction fracture of the clavicle occurs in 6 per cent. of cases.

Frequency and Diagnosis of Twin Pregnancies.—SEEGERT (*Zeitschrift f. Geburtshilfe und Gynäkologie*, 1903, Band xlix., Heft 2) contributes an interesting paper upon this subject from the records of Olshausen's clinic in Berlin.

In 15,977 births twins occurred in 233, or 1 in 68.6 births. In the great majority of cases pregnancy had advanced a little beyond the eighth month.

A positive diagnosis before labor was made in 43.3 per cent. In nearly all cases the presentation of the twins was stated. Both presented by the vertex in 46 per cent. In 34 per cent. one child was in vertex and one in breech presentation. In 8 per cent. both children were in breech presentation, and in 8 per cent. one child presented by the vertex and one transversely, and in 4 per cent. one child was in breech presentation and one in transverse presentation.

In 67.3 per cent. the children were of the same sex; in 32.7 per cent., of unlike sex. In 75.4 per cent. the twins were duovular, and in 24.6 per cent. they were uniovular.

So far as obstetric operations went in these cases, they were necessary in 41.6 per cent. Of these, the forceps was used in 51 per cent., extraction alone in 35 per cent., and version and extraction in 23 per cent. Complications occurred in a considerable percentage of cases. Of these, most frequent was eclampsia, in 12.88 per cent.; next was hemorrhage, in 11.16 per cent.

In making the diagnosis more reliance was placed upon the detection of three great fetal parts by palpation. Next in value as a diagnostic sign was the recognition of two heart sounds. Ahlfeld's sign, which consists in meas-

uring from the lowest presenting part to the fundus of the uterus, was also employed. When this distance was more than 30 cm. the probable diagnosis of twin pregnancy was made. Keilmann's sign was also present. This consists in examining to determine fluctuation in the amniotic liquid. In polyhydramnios fluctuation is distinctly felt when the finger is carried against the membranes, while in twin pregnancy this is not the case. Another interesting sign of twin pregnancy consists in prolapse of the umbilical cord without rupture of the membrane.

A New Cranial Perforator.—In the *Annali di Ostetricia e Ginecologia*, No. 4, 1903, TRIDONDANI describes a new and very simple perforator for the performance of craniotomy.

The instrument has a straight stem terminating in a trephine crown. There is no centre-pin, but a circular, hollow instrument whose edge is sharp. The sides of the crown are narrowed to join the stem, leaving an open loop beneath the crown.

This instrument has the great merit of simplicity and can be very easily sterilized.

Syncytiolysis and Hæmolysis.—In the *Zeitschrift für Geburtshilfe und Gynäkologie*, 1903, Band xlix., Heft. 2, SCHOLTEN and VEIT contribute a paper upon this subject. They find that the blood in pregnancy shows great variation. This results from fragments of chorionic villi carried into the circulation, and from the influence of erythrocytes and leucocytes and epithelia of the chorion upon each other. The result of this is the formation of syncytiolysin as a side chain of erythrocytes, and hæmolysin as a side chain of epithelia of the chorion. Hæmoglobin is thus dissolved from the erythrocytes, and protoplasm from the syncytium into the serum. The albumin from the maternal blood found in the serum is transferred to the foetal blood. Those albuminoids which are precipitated from maternal blood through the foetal serum do not enter the foetal circulation, and, also, those substances which are precipitated from the foetal serum through the mother's do not enter the maternal circulation.

The nourishment of the fœtus is secured by the albuminoids dissolved in serum, while nutritive material is given up into the maternal serum from the epithelia of the chorion through syncytiolysis. The fact that albumin derived from foetal bodies may again enter the foetal organism because it is dissolved in the maternal serum is accounted for by the scanty foetal contents.

The application of the side-chain theory to the phenomenon of the transfer of chorionic villi has not only given us a better understanding of the changes occurring in pregnancy, but also a better knowledge of foetal nutrition. The entrance of foetal elements into the maternal circulation secures the metabolism of the fœtus.

The balance of nutrition between fœtus and mother is disturbed when too great a number of villi are absorbed; then follow excessive hæmolysis, with hæmoglobinæmia, albuminuria, hæmoglobinuria, and feeble syncytiolysis, as illustrated in eclampsia where syncytium from the villi are found unchanged in the arteries of the lungs. When the absorption of villi is diminished the changes in pregnancy are also lessened, while the nutrition of the fœtus re-